UJI KONSENTRASI NANOEMULSI SERAI WANGI (*Cymbopogon nardus* L.) UNTUK MENGENDALIKAN JAMUR PATOGEN TULAR BENIH PADA CABAI (*Capsicum annum* L.*)*

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Abstrak

Patogen tular benih merupakan salah satu faktor penghambat peningkatan produksi cabai. Penggunaan nanoemulsi serai wangi dapat menekan pertumbuhan jamur patogen tular benih pada cabai. Penelitian ini bertujuan untuk mendapatkan konsentrasi nanoemulsi serai wangi yang efektif dalam mengendalikan jamur patogen tular benih dan untuk pertumbuhan bibit cabai. Penelitian terdiri atas: 1.Uji blotter yang menggunakan Rancangan Acak Lengkap (RAL) dengan 7 perlakuan dan 16 ulangan. 2. Uji daya kecambah menggunakan Rancangan Acak Lengkap (RAL) dengan 7 perlakuan dan 8 ulangan. 3. Uji lapang menggunakan Rancangan Acak Lengkap (RAL) dengan 7 perlakuan dan 8 ulangan. Perlakuan yang digunakan yaitu kontrol, fungisida (propineb), nanoemulsi serai wangi konsentrasi 0,40%, 0,45%, 0,50%, 0,55%, 0,60%. Data yang diperoleh dianalisis menggunakan sidik ragam dengan uji lanjut Least Significance Different (LSD) pada taraf 5%. Parameter yang diamati adalah persentase benih cabai yang terserang jamur, identifikasi jamur patogen tular benih, persentase benih cabai yang terserang masing-masing jamur, persentase daya kecambah normal, persentase bibit muncul lapang, persentase bibit terserang jamur, persentase bibit mati, tinggi bibit, berat basah dan berat kering bibit. Hasil penelitian menunjukkan bahwa nanoemulsi konsentrasi 0,45% paling efektif mengendalikan jamur patogen tular benih dan untuk pertumbuhan bibit cabai dengan efektivitas rata-rata 120,39%.

Kata kunci: cabe, patogen tular benih, nanoemulsi serai wangi

Concentration Test Of Nanoemulsion Of Lemon Grass (*Cymbopogon nardus L.*) To Control Seed Fungal Pathogenic Fungus On Chilli (*Capsicum annum L.)*

Abstract

Seed borne pathogens are an inhibiting factor in the increase in chilli production. The use of lemon grass nanoemulsion can suppress the growth of seed borne pathogenic fungi in chilli. This study aims to obtain the concentrations of lemon grass nanoemulsion which are effective in controlling seed borne pathogenic fungi and for the growth of chilli seeds. The study consisted of: 1. Blotter test using a completely randomized design (CRD) with 7 treatments and 16 replications. 2. The germination test used a completely randomized design (CRD) with 7 treatments and 8 replications. 3. Field test using a completely randomized design (CRD) with 7 treatments and 8 replications. The treatments used were control, fungicide (propineb), nanoemulsion lemon grass with a concentration of 0.40%, 0.45%, 0.50%, 0.55%, and 0.60%. The data obtained were analyzed using variance with the advanced test of Least Significance Different (LSD) at the 5% level. The parameters observed were the percentage of chilli seeds that were attacked by fungi., identification of seed borne pathogens, percentage of chilli seeds that were attacked by each fungus, percentage of normal germination capacity, percentage of seedlings sprouting, percentage of seed attacked by fungus, percentage of dead seed, seed height, weight, wet and dry seedlings. The results showed that a nanoemulsion with a concentration of 0.45% was the most effective in controlling seed borne pathogens and for the growth of chilli seeds with an average effectiveness of 120.39%.

Key words: Chilli, seed borne pathogen, nanoemulsion lemon grass.